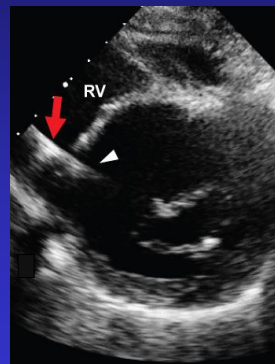


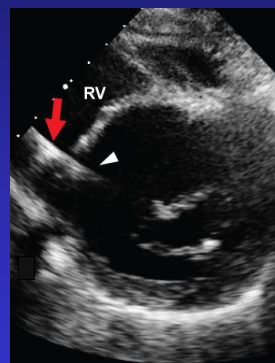
This patient shows:

1. Biventricular wires
2. Reverberation
3. Mirror image
4. Side lobes

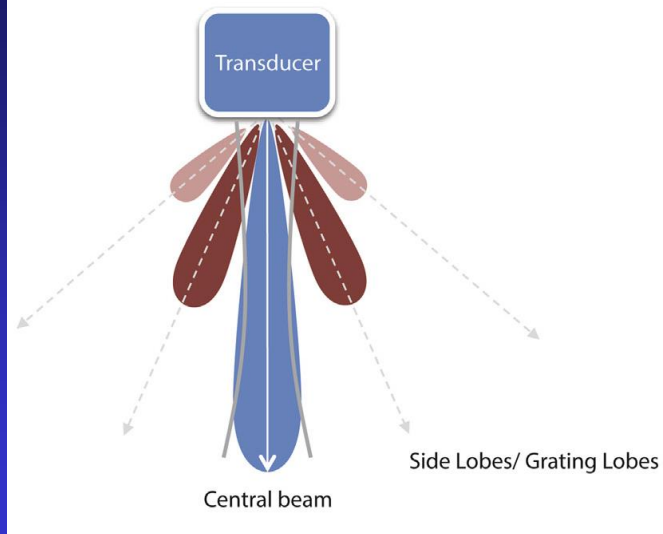


This patient shows:

1. Biventricular wires
2. Reverberation
3. Mirror image
- ▶ 4. Side lobes



2. Beam properties

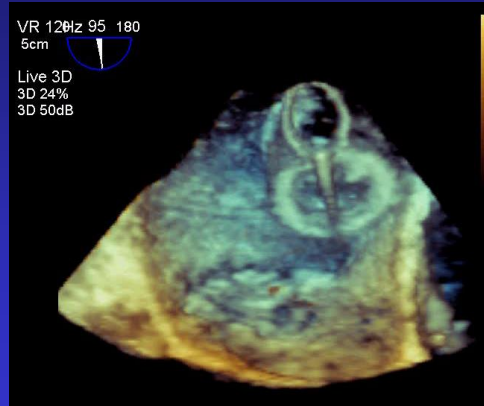


Echo Map of True Object and Side Lobe Artifacts



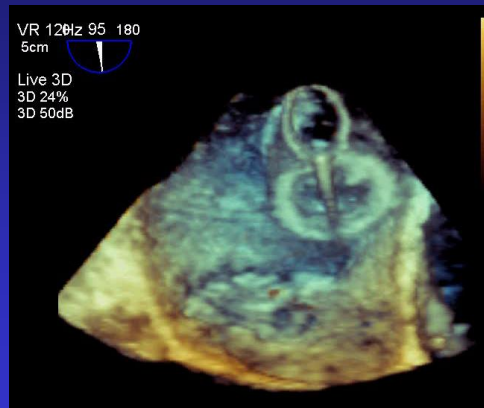
Apical TEE: What type of occluder device is in the atrial septum?

1. Helical
2. Figure of 8
3. Circular
4. Conical

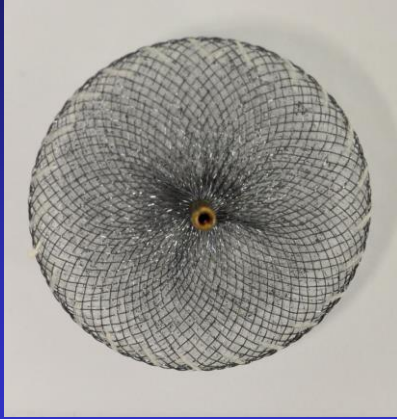


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AMPLATZER DEVICE AND ECHO



**This change in apparent shape
is caused by which physical
effect?**

- 1. Scattering**
- 2. Refraction**
- 3. Reflection**
- 4. Acoustic shadowing**

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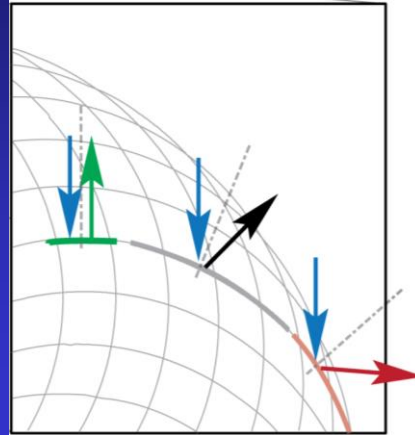
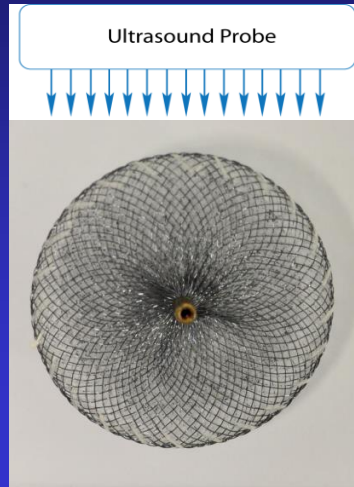
ECHOCARDIOGRAPHY IN LA APPENDAGE CLOSURE

**Etiology and Relevance of the Figure-of-Eight Artifact
on Echocardiography after Percutaneous Left Atrial
Appendage Closure with the Amplatzer Cardiac Plug**

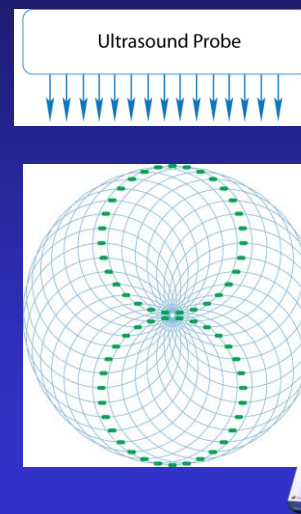
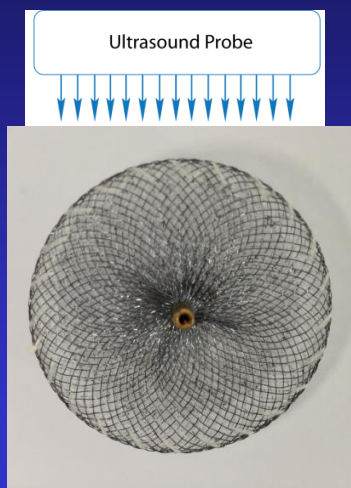
Philippe B. Bertrand, MD, MSc, Lars Grieten, MSc, PhD, Pieter De Meester, MD, Frederik H. Verbrugge, MD, Wilfried Mullens, MD, PhD, David Verhaert, MD, Maximo Rivero-Ayerza, MD, PhD, Werner Budts, MD, PhD, and Pieter M. Vandervoort, MD, *Genk, Hasselt, and Leuven, Belgium*

JASE 2014; 27:323-8

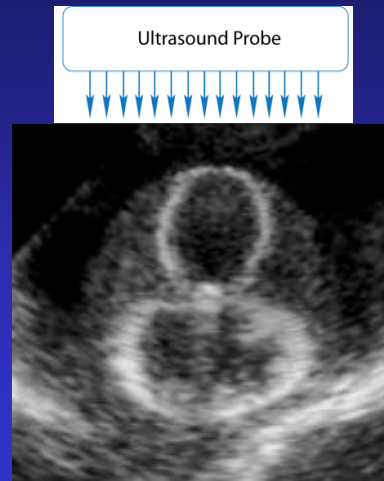
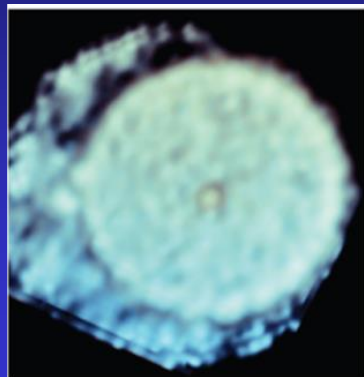
Physics principle: Angle of reflection = angle of incidence for a specular reflector



Result: Figure-of-8 artifact



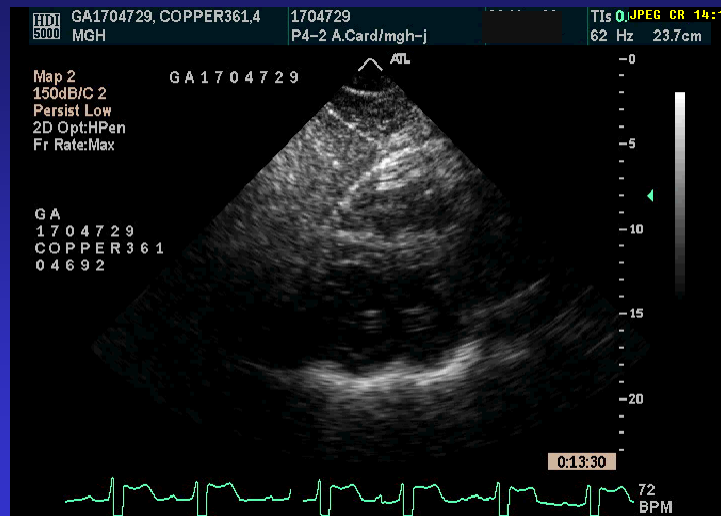
Result: Figure-of-8 artifact versus true shape when beam views device en face



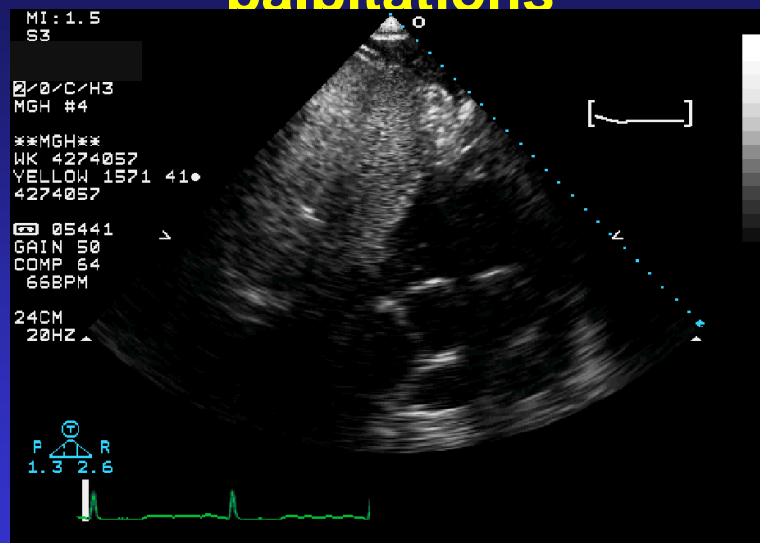
The appearances in these patients is caused by which physical effect?

- 1. Scattering**
- 2. Refraction**
- 3. Reflection**
- 4. Mirror imaging**

50 yo man with chest pain



30 yo woman with palpitations



The appearances in these patients is caused by which physical effect?

- 1. Scattering**
- ▶ **2. Refraction**
- 3. Reflection**
- 4. Mirror imaging**

Lens Artifact Creating Twin Images



Artifactual echoes :

- 1. Always move parallel to a real object**
- 2. Create turbulent color flow in their vicinity**
- 3. Are infrequent by TEE**
- 4. Can appear to pass through real objects**

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